

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-005038**Date Inspected:** 06-Dec-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1330**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	NA	<b>CWI Present:</b>	Yes	No			
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No	N/A
				<b>Delayed / Cancelled:</b>	Yes	No	N/A
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG Fabrication				

**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

**Heavy Industry Department Blasting Workshop**

At approximately 1530 hours the QA Inspector performed random visual inspections and witnessed ZPMC QC Inspector Mr. Zhang Liang performing surface profile measurements of floor beam components which had recently been blast cleaned prior to primer coat application. The following items are listed on the ZPMC Notice of Inspection request #014:

Diaphragm Top Part: FB003-024, FB003-026, FB003-034, FB003-039, FB003-054

Diaphragm Bottom Flange: FB005-012, FB013-005, FB013-014, FB014-007, FB014-008

Box Beam: FB006-042-001-002, FB006-042-003-004, FB006-049-001-002, FB006-049-003-004,

FB006-055-001-002, FB006-055-003-004, FB006-056-001-002, FB006-058-003-004, FB006-058-001-002, FB006-058-003-004

H Splice: FB006-107-016, FB006-107-020, FB006-108-005, FB006-130-019, FB006-108-016, FB006-108-018, FB006-111-010, FB006-130-015.

Special provisions section 10-1.69 CLEAN AND PAINT STRUCTURAL STEEL state: "Exposed new metal surfaces, except where galvanized or metallized, shall be dry blast cleaned in conformance with the requirements

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in Surface Preparation Specification No. 10, "Near White Blast Cleaning," of "SSPC: The Society for Protective Coatings." Blast cleaning shall leave surfaces with a dense, uniform, sharp angular anchor pattern of not less than 40 m nor more than 86 m as measured in conformance with the requirements in ASTM Designation: D 4417."

Mr. Liang obtained measurements at three random locations and the following profile measurements were observed: location #1: 78 m; location #2: 74 m and location #3: 81 m. The average of these profiles equals 77.6 m which appears to comply with project specifications listed above. The QA Inspector observed the areas that have been blast cleaned appears to visually have a uniform appearance and comply with project specifications. ZPMC QC representative Mr. Lay Tau informed the QA Inspector that ZPMC will apply primer coating material within then next hour.

### Bay #8

The QA Inspector performed random final visual and magnetic particle inspections of OBG floor beam weld FB54-008-008, -009, -020, 0-028, -040, -041, -056, -068, -069. The QA Inspector observed the areas that were magnetic particle inspected appear to comply with project specifications. The QA Inspector observed four of the six vertical fillet welds appear to have overlap and are visually rejectable. The QA Inspector showed ZPMC representative Mr. Huang Wen Pang the overlap on FB054-008 and similar overlap on FB050-001. Mr. Pang said he will have the welds fixed and he will inform ZPMC CWI Mr. Lia Wei Wei, who accepted these welds of the visual rejections. For additional information on these inspections see the TL6028 Magnetic Particle Test Report.

### OBG Bay #4

The QA Inspector performed random final visual and magnetic particle inspections of tower welds SSD1-SA356-001, SSD1-SA369A/B-11, SSD1-SA369A/B-12, SSD1-SA369B/B-3, SA369B/B-4, SA369B/B-5, SA369B/B-7, SA369B/B-8, SA369B/B-11, SA369B/B-12 and SA369B/B-16. The QA Inspector observed the areas that were magnetic particle inspected appear to comply with project specifications. The QA Inspector observed three of the eight vertical fillet welds have been weld repaired and the welds have not been ground to a smooth surface. There also is no access to weld SSD1-SA356-011 since it is on the bottom of the assembly. ZPMC is going to turn this assembly over on December 7, 2008 (tomorrow) and weld SSD1-SA356-011 will then be accessible to allow QA to perform visual and magnetic particle inspections of this weld. For additional information on these inspections see the TL6028 Magnetic Particle Test Report.

### Summary of Conversations:

See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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